as yet to bring all of the sales even of distilled liquors within the control of the companies. Nevertheless the success of the system — measured by the crucial test of the decreasing consumption of distilled liquors — has been phenomenal. The annual consumption per inhabitant has been reduced in Sweden — formerly one of the most hard drinking countries in the world — from 14.2 quarts in 1874 to 6.8 quarts in 1892. In Norway from 1876 to 1892 (as the percentage of the sales of other agencies than the companies has fallen from 91.7 to 48.7) the per capita consumption has been reduced from 7.0 quarts to 3.3 quarts. During substantially the same period (1875 to 1892) the consumption has fallen in Great Britain from 6.3 quarts to 5.2, and in Holland from 9.5 to 9.4. It has risen in Germany from 5.7 to 9.5; in France from 4.3 to 8.7; in Belgium from 8.6 to 10.2; in Austria (1887 to 1891) from 3.8 to 5.9; and in the United States (1878 to 1893) from 4.36 to 6.04. Experience emphatically substantiates the merits, already so manifest on grounds even of general reasoning, of the Scandinavian system. C. C. C.

Joint-Metallism. A Plan by which Gold and Silver together, at Ratios always Based on their Relative Market Values, may be made the Metallic Basis of a Sound, Honest, Self-regulating and Permanent Currency, without Frequent Recoinage and without Danger of One Metal Driving out the Other. By ANSON PHELPS STOKES. Third edition. New York and London: G. P. Putnam's Sons, 1895. 8vo. pp. xxii+221.

MR. STOKES's book is a plea for a larger use of silver as money, according to a plan of his own which he calls joint-metallism. It is divided into four parts. The first consists of a series of letters written by himself to certain newspapers, and several editorials criticising these letters; the second gives a comparison of the author's plan with bimetallism; the third purports to be a history of the science of money; and the fourth contains a criticism of the theory of credit, together with replies to criticisms of the plan of joint-metallism.

The portion of the book which is important for our present purpose, because it is the only part that is new, is the plan for the enlarged use of silver. In brief it is as follows: Strike silver coins of equal weight with the five-dollar gold piece, to be known as "standards." For all debts

over $10, contracted six months after the passage of the act legalizing such coins, let it be lawful to pay "half in gold and half in such number of standards as shall be approximately equal thereto." This number is to be determined by the Secretary of the Treasury "according to the average relative market values of gold and silver, from the time of the passage of the act, and based on the average market values of all the intervening months," the ratio thus determined to be the legal ratio for that month. The mint is to be open to the coinage of "standards," double standards, and 1000-standard pieces, "when the silver is presented accompanied by an equal value of gold at the current government ratio."

The most important advantages claimed by the author for his plan are these: It would promote the use of gold and silver equally; "it would make the measure of value more just and stable, because based on both precious metals jointly;" would prevent the monopoly of the metallic basis of money; would give a "proper elasticity to the metallic basis of the currency because the production of silver coin can always be largely and promptly increased by labor, while the production of gold cannot;" and would establish between the metals the "true economic ratio of values, viz., the relative costs of production in the poorest mines of gold and of silver that could be worked at a profit," which ratio would probably be permanent.

There is no need of discussing here the much debated assumptions which Mr. Stokes makes, in common with the advocates of the free coinage of silver, as to the need of "more money," the cause of the fall in prices, etc. If we grant all these Mr. Stokes's plan is fatally defective as a remedy. On its face it would make room in our circulation for an amount of silver equal in value to our gold. According to the treasury statistics there were "in circulation" on April first of the present year $528,000,000 in gold and gold certificates, and $377,000,000 in silver and silver certificates. There would thus be room for an additional $151,000,000 of silver, an amount over fifty millions less than the national bank notes now outstanding, and less than one-tenth of our total "circulation" of all kinds of money on the above date. A believer in the theory that prices depend entirely on the quantity of money surely cannot think that a fall of 30 per cent. in prices could be restored by such an increase.

If, however, the quantity of money were really doubled by Mr. Stokes's plan, what reason is there for thinking that just double the

amount of the existing gold circulation is needed? Or that an annual addition to our circulation of just twice the yearly production of gold would be sufficient to keep prices stable? Again, when the author says that his plan would give "proper elasticity" to our metallic circulation because the production of silver can "always be largely and promptly increased," he forgets that elasticity includes contraction as well as expansion, and provides no means for that.

More fatal still to the success of his plan is the method of determining the ratio between the two metals. The price of silver might vary within a day after the ratio for the following month was proclaimed. If it fell, for example, it might pay a person to have equal values of gold and silver coined, pay his debts in silver, purchase more with part of his gold, melt the rest of the gold for recoinage, and repeat the process, with a profit on every repetition. For it is only "lawful," not necessary, to pay in *both* metals. The author thinks such an operation could not occur because the tendency of either metal to decline would be offset by the "knowledge that with any decline in price a larger proportion of this metal would be demanded at the mint and in payment of debts." The amount of silver that can be coined is determined, however, by the amount of gold available for that purpose. A "larger proportion" of silver could be demanded at the mint, then, only by melting and recoining part of the gold, as already remarked; that is, the silver part of the circulation would increase at the expense of the gold part.

The author thinks, further, that the ratio would become permanently equal to that of the costs of production in the poorest mines worked at a profit. Who shall determine that cost? In the Senate report on that subject in the second session of the Fifty-second Congress, Mr. Leech, then Director of the Mint, says: "I adhere to the opinion that it is impossible from any statistics which have been compiled to ascertain the average cost of the annual yield of the mines of either gold or silver." Moreover, the market value primarily depends, not on the cost of production, but on demand. The price will approach the cost of production in the *poorest mine whose supply is necessary to the demand;* and if demand increase it will stimulate production in poorer and poorer mines, and so tend to make the ratio of costs change accordingly.

Mr. Stokes seems to think that his plan would not affect debts contracted before it began to operate. He is mistaken. On his own

theory of the relation of money to prices, all old debts payable in gold would be scaled down because his addition to the legal-tender money would diminish the value of the gold part of it.

There is room for but one more point, of several that might be made. Even if the world's stock of money is less than is desirable, the United States has its proportionate share. Any addition to that share, without a corresponding addition to the stock of other countries, would diffuse itself over the world, and our author's plan would thus defeat itself. The plan proposed by the author is indeed only a scheme for the limited coinage of silver; limited, that is, by the amount of gold available each year. We tried the limited-coinage plan from 1878 until the repeal of the Sherman law; with what result the world knows.

Viewed from the literary and scientific standpoints the book is open to severe criticism. It is scrappy, its argument is desultory, and it mistakes statements of opinion and rhetorical figures for facts and sound argument. The "History of the Science of Money," in Part III., is not a history of that subject at all, but a collection of the opinions of certain authors and notices of their books. Mr. Stokes's ideas on the subject of credit as a factor in determining prices are based on the extreme views of the intolerant and conceited Henry D. Macleod, whom few, if any, of those who emphasize credit would care to acknowledge as a safe guide. He weakens his case, moreover, by appealing to "the constitution" and the opinions of the "fathers" of the Republic, in order to prove the desirability of the rehabilitation of silver as money. Such an appeal is proper enough, perhaps, in a political speech, but somewhat out of place in what is intended to be a scientific argument.

DAVID KINLEY.

Life of Adam Smith. By JOHN RAE. London and New York: Macmillan & Co., 1895. 8vo. pp. xv + 249.

MORE has, perhaps, been added to the easily available knowledge of Adam Smith in the past few months than during the century that followed the intimate memoir of his friend Dugald Stewart. Not long since, Mr. James Bonar opened for our inspection the intellectual workshop of the father, or, if one so pleases, the stepfather, of Political Economy. Mr. John Rae, with the co-operation of many scholars and of university and library officials, has given us a *Life of Adam Smith*